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ABSTRACT

At its most basic level, philosophical inquiry--the importance and uses of critical thinking--can provide methods for examining the things that are taken for granted during daily routines. This paper explores philosophical inquiry in the field of instructional technology. In the first section, philosophy and the field of instructional technology are explored. The second section provides an overview of the four dimensions of philosophical inquiry and their relevance to instructional technology: the Intellectual Dimension, which aims at Truth, the Aesthetic Dimension, which aims at Beauty, the Moral Dimension, which aims at Goodness, and the Spiritual Dimension, which aims at Unity. The purpose of the paper is to provide a framework for examining fundamental issues in the field and to position philosophy as a legitimate method of inquiry in instructional technology. (Contains 45 references.) (AEF)

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Philosophical Inquiry in Instructional Technology:

The Forgotten Pathway to Learning

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This paper was inspired by Donald P. Ely's (1970) classic article, *Toward a Philosophy of Instructional Technology*. The author would also like to acknowledge Tom Morris (1997; 1999), whose ability to translate ancient wisdom provided guidance and direction.

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The vista of instructional technology appears to be changing. While the audio-visual field has "grown-up" and become a profession, the field of instructional technology is still maturing. Although no longer what it once was, instructional technology appears to be in a veritable state of transition, finding a new voice in the information age. The evolution of computer technology continues to influence the way we live and learn in the 21st Century. With research flourishing across disciplines, the future holds promise for discovering uncharted territories in human learning. And, a body of knowledge, now unique unto itself, is constantly expanding through instructional technology research, as well. Although Instructional Technology has always had a strong orientation toward practice (Richey, 1997), the findings of early researchers have often exerted influence over new directions in the field. Edgar Dale's (1946/1996) "cone of experience" predates virtual reality and the contemporary constructivist movement; yet, his proposition that reality is the basis of all effective learning supports these movements that value authentic learning environments. Sometimes, the voices of our founders can help us make sense out of contemporary issues. James D. Finn (1953/1996) felt that our body of systematic theory needed to be constantly expanded by research and thinking. It appears as if instructional technology research is thriving – confirming our theories, generating new hypotheses – but, the status of *thinking* within our field could be one of the most important, forgotten pathways to learning.

Philosophy is all about *thinking* (Morris, 1999). Occasionally, as researchers and practitioners, we become victims of our own routine, replicating steps, over and over again, rarely pausing to think about what it all means or to reflect on our values and beliefs as instructional technologists. Philosophy was originally a way of life (Marinoff, 1999) and a requirement for living (Morris, 1999); not the abstract, academic discipline as it is commonly

known today. Back in the days when Socrates proclaimed that "the unexamined life is not worth living," philosophy was intended for ordinary people and it was concerned with real life and how to live it (Marinoff, 1999). Although the world's great wisdom tradition has evolved into a multiplicity of discourse communities, the central concern of philosophy from ancient time – how to think critically – has been relatively absent from the public agenda in recent years (Marinoff, 1999). Philosophical inquiry – the importance and uses of critical thinking – remains misunderstood. At its most basic level, philosophical inquiry can provide methods for examining the things that we so often take for granted during our daily routines. This paper explores philosophical inquiry in the field of instructional technology. First, philosophy and the field of Instructional Technology will be examined. Second, four dimensions of philosophical inquiry in instructional technology will be explored. The purpose of this paper, therefore, is to provide a framework for examining fundamental issues in the field and position philosophy as a legitimate method of inquiry in instructional technology.

Philosophy and the Field of Instructional Technology

Donald P. Ely could easily be recognized as the leading philosophical thinker in Instructional Technology today. His concern about the definition of the field spans 40 years and his early thoughts on philosophy and instructional technology were decades ahead of his time. Thirty years ago, when the field was not yet a discipline (Ely, 1970), Ely recognized the importance of finding a "... utilitarian and commonplace usage" (p. 81) of the word "philosophy." Ely (1970) posited that "It is only right that there should be a philosophy of instructional technology and that it should vary from individual to individual" (p. 81). Accordingly, philosophy may be interpreted as a composite statement of beliefs and values from which personal purpose and direction are derived (Ely, 1970).

Instructional Technology is a confluence of many disciplines including education, communications, the arts and sciences. With such diverse roots, it is easy to understand the differing orientations that have emerged in the field, such as behaviorism, cognitivism and constructivism. Yet, fields of study such as Instructional Technology do not have philosophies; people do (Ely, 1970; Smith & Ragan, 1999). Therefore, philosophy influences the theories and research that instructional technologists deem most valuable (Richey, 1998; Smith & Ragan, 1999). Personal beliefs and values define what's important to people and they guide and direct behavior. An instructional technologist's philosophical orientation also serves as a device that filters instructional development decisions (Luiz, 1982). Luiz (1982) used philosophical inquiry as a framework for exploring designer decision-making and he asserted that

> Instructional developers need to know the implications of their decisions when advocating one philosophy, rather than another. It is assumed that their personal philosophies, implicit in their actions, act as a screening device through which their individual decisions are filtered (p. 110)

Therefore, the more we know about our beliefs and values, the more reflective we become in our work as instructional technologists.

Philosophy is also important in our field because it is a foundation for theory (Koetting, 1996; Smith & Ragan, 1999; Snelbecker, 1974). The roots of any science can be traced back to philosophical origins (Koetting, 1996; Luiz, 1982) and, since the field of instructional technology is built upon solid, scientific foundations, there are important implications.

> While such searching for philosophical roots can take on the nature of a rather pointless academic game, and while it is often the case

> that such procedures are used to legitimize rather poorly thought-out ideas, it is, nevertheless, true that it is very often difficult to understand why a particular scientific theory was formulated without understanding its philosophical origins (Snelbecker, 1974, p. 46).

The prescriptive function of theory may be drawn from various philosophical orientations or "filtered" through the personal philosophies of people. Accordingly, theory can be an expression of belief (Koetting, 1996; Macdonald, 1995). Since instructional technologists operate from theoretical frameworks that are intimately tied to their values (Koetting, 1996; Richey, 1998), it follows that theory and philosophy are intimately connected, thus, exerting influence on the field. Philosophical inquiry, therefore, could serve to explicate connections between theory and philosophy while providing insight into the choices made by instructional technologists.

Thus far, this paper has suggested that philosophy is important to instructional technologists for two reasons: 1) people have philosophies that influence practice; and, 2) theory is derived from philosophy. The ultimate goal of philosophy, however, is wisdom (Morris, 1999), which provides depth and usefulness in practical matters. For the instructional technologist, the pursuit of wisdom is *the* connection between theory and practice, and philosophy cultivates unique skills and methods of thinking. There are three types of skills that are developed through philosophical inquiry: 1) analysis, 2) assessment, and 3) argument (Morris, 1999). As a method of thinking, philosophy cultivates the ability to *analyze* complex problems, *assess* competing claims and prepare *arguments*, which are a reasoned presentation of ideas (Morris, 1999). While these skills are not necessarily specific to the field of instructional technology, in large part, they are aligned with and support the 1998 instructional design

competencies and performance statements published by the International Board of Standards for Training, Performance and Instruction (ibstpi, 1999). Further, the skill set of philosophy relies upon the use of reason, which is "... the power of moving logically from one idea to another, of seeing connections of logic or cause and effect, and of inferring conclusions from given premises" (Morris, 1999, p. 31). In a field where instructional technologists are continuously thrust into choice-making situations, the skills of philosophy appear to be legitimate methods of inquiry in the field.

Philosophical Foundations of Instructional Technology

Given the value that philosophy offers instructional technology, the historical foundations for future developments in philosophical inquiry will now be explored. The question is where to begin? Ertmer and Newby (Ertmer & Newby, 1993) presented two opposing positions on the origin of knowledge – empiricism and rationalism – illustrating clear connections between current learning theories and their historical foundations in philosophy. Empiricism is based upon the belief that knowledge is derived from sensory experience gained through interactions with the environment (Ertmer & Newby, 1993; Morris, 1946; Schunk, 1991). Rationalism claims that knowledge originates in the mind through reason (Ertmer & Newby, 1993; Morris, 1946; Schunk, 1991). Clearly, these positions on the origin of knowledge can be linked to behaviorism, cognitivism and constructivism. However, Ely's (1970) desire to find a sense of usefulness in philosophy doesn't require this type of probing historical analysis. Ely's approach is more practical and begins with the twentieth century since instructional technology is a twentieth century movement. Dewey's ideas about the relationships between experience, learning and theory could be a reasonable starting point for studying philosophy in instructional technology because he spurred a variety of research and development in education that

ultimately influenced the field. However, instructional technology emerged from the audio-visual communications movement (Saettler, 1990), and it makes better sense to select audio-visual communications as an arbitrary starting point for studying philosophy in instructional technology.

During the late 1920s and 1930s, film utilization practices and the role of visual aids in education were "hot" topics. Among the most notable researchers were Knowlton and Tilton (1929) who explored the utilization of motion pictures in instruction and Hoban, Hoban and Zisman (1937) who were interested in the inherent value of visual aids over verbalism in education. Another prominent educational researcher, W. W. Charters, was also studying permanent learning in the 1930s, and he examined the connections between education and the media. Charters was among the first people to use the term "educational engineering" (Saettler, 1990) and his work laid the foundation for the modern, systems approach to instruction (Ely, 1970; Seels & Richey, 1994). Although historically rooted in audio-visual communications, Charters' contributions to instructional technology and his influence on the field are far-reaching. In fact, it was a student of W.W. Charters, Edgar Dale, whose "cone of experience" became the most influential philosophical concept in the field (Ely, 1970).

Dale's (1946/1996) "Cone of Experience" is a conceptual model of learning experiences based upon a concrete to abstract continuum. The cone also served to synthesize the progressive theories of John Dewey, current thinking about audiovisual communications; and, contemporary thought from the field of psychology (Seels & Richey, 1994). More importantly, Dale's contribution was the first attempt at integrating learning theory and audio-visual communications (Dale, 1946/1996; Seels & Richey, 1994).

In the late 1930s, Dale collaborated with Charles F. Hoban, Jr. on several projects concerned with the use of motion pictures in teaching. Although Hoban's research interests and contributions to the field explored the relationships among visual aids and the process of learning, his 1956 keynote address at the Lake Okoboji Conference was instrumental in moving the field toward a systems orientation (Ely, 1970). The application of systems theory in instructional technology was advanced by James D. Finn, who was a student of Edgar Dale *and* served under Hoban in the US Army during World War II. Finn's vision for integrated systems and processes was a compendium of thought that surrounded the emerging field, which incorporated the voices of the early founders while blazing a new trail that would ultimately become known as instructional technology.

Figure 1. Philosophical lineage in instructional technology

While "…the philosophical lineage of Charters-Dale-Hoban-Finn … yielded the most productive thinking about the field …" (Ely, 1970, p.85), any discussion about the role of philosophy in instructional technology truly begins with Jim Finn. McBeath (1972) reminds us that "for Finn, philosophizing is an essential component of future planning if we are to go beyond the expedient" (p. ix).

A Brief History of Philosophy in Instructional Technology

When Finn (1962/1996), delivered "A Walk on the Altered Side" before a meeting of the John Dewey Society in 1962, he prepared for this paper by studying several recent books on educational philosophy. Early in his presentation, he defined technology "… as a way of thinking about certain classes of problems and their solutions" (p. 48), which he felt was a legitimate concern for the educational philosopher. At the time, instructional technology was

misunderstood, and Finn framed his discussion as an indictment of the many educational philosophers who "failed to understand" that technology is a way of thinking (Finn, 1962/1996). For Finn (1962/1996), clarification is one of the jobs of the philosopher, and since the path was not yet clear, he concluded his presentation by proclaiming that "... the vista of educational philosophy is more exciting than ever" (p. 54). With respect to the role of philosophy in instructional technology, Finn's (1962/1996) interpretation of technology as, "... fundamentally, a way of thinking" (p. 53) is both trenchant and meaningful.

Ely's (1970), paper, "Toward a Philosophy of Instructional Technology," appears to be the first exploration of philosophy within the Instructional Technology knowledge base. Ely's notion of 'truth' allows us to interpret philosophy as a subjective "filter" that mediates behavior and decision-making processes. Ely's influence appears evident in the 1972 definition of the field (AECT, 1972), which focused on "the facilitation of human learning." The 1972 definition stated that "the uniqueness of educational technology, and, therefore, its reason for being, lies in the philosophical and practical approach it takes toward fulfilling this purpose" (p. 37). At the time, Dr. Ely was chairman of the Definition and Terminology Committee for the Association for Educational Communications and Technology (AECT); and, a group of experts and more than 100 members of AECT participated in crafting this statement of definition. The very presence of such a strong statement about philosophy, validated by an esteemed group of professionals, underscores the importance of philosophical inquiry in the field.

Keller (1979) claimed that design needs to address more than practical issues and provide for the human spirit. Specifically, Keller referenced Plato's *Republic* and described three parts of the soul, which includes wisdom or reason (associated with the head), honor or spiritedness (associated with our heart) and personal gain (related to appetites). Keller (1979)related

behaviorism to controlling individual appetites and cognitivism to reasoning abilities, "but with respect to the heart or spirit of the learner, which represents individual determination and persistance, we lack an adequate, systematic approach" (p. 27). A few years later, Keller (1983) reinforced the idea that motivation is the forgotten heart of instructional design.

In 1982, Thomas Luiz (1982) conducted a philosophical investigation of educational and instructional practices and techniques entitled "A Comparative Study of Humanism and Pragmatism as They Relate to Decision Making in Instructional Development Processes." Luiz (1982) sought to answer the question whether a philosophical inquiry would provide a framework for enabling instructional developers to make better and more consistent decisions. Luiz (1982) posited that

> "Instructional developers need to know the implications of their decisions when advocating one philosophy, rather than another. It is assumed that their personal philosophies, implicit in their actions, act as a screening device through which their individual decisions are filtered" (p. 110).

Luiz (1982) concluded that an instructional developer's philosophical orientation served as a device that filtered instructional development decisions, a perspective that lends support to Ely's notion of philosophy.

In 1983, Koetting (1983) explored the notion of knowledge in instructional technology and developed an epistemological framework for inquiry in our field. Koetting's paper, "Philosophical Foundations of Instructional Technology," (1983) may be one of the first works to directly relate critical theory to the field of instructional technology (Nichols & Allen-Brown, 1996). Based upon the assumption that Instructional Technology is rooted in an empirical view

of knowledge, Koetting (1983) discussed the implications for future research; and, proposed alternative philosophical and theoretical frameworks for inquiry within the field. Next to Ely's paper in 1970, Koetting's paper was one of the few specific papers that connected philosophy directly to the field of instructional technology.

Despite Luiz's novel contribution to the Instructional Technology theory base, and Koetting's early exploration of critical theory, philosophical inquiry has since remained relatively dormant in the field. By 1991, Koetting and Januszewski (1991) concluded that philosophical debate was relatively absent from the instructional technology literature and suggested that "... there is not much work that looks at differing conceptualizations and frameworks within educational technology" (p. 2). However, the emergence of post-modern and constructivist orientations in instructional technology may be breathing new life into philosophical inquiry within the field. Denis Hylnka (1992), who has published widely on post-modernism, asserts that "any philosophy which can help us to illuminate what we do, how we do it, and why we do it, is worth our time and our effort" (p. 4).

In 1993, Ertmer and Newby presented two opposing positions on the origin of knowledge – empiricism and rationalism – illustrating the philosophical origins of behaviorism, cognitivism and constructivism. Albeit brief, these authors made a clear connection between current learning theories and their historical foundations in philosophy (Ertmer & Newby, 1993).

By 1996, The *Handbook of Research for Educational Communications and Technology* (Jonassen, 1996), devoted an entire chapter to "Philosophy, Research, and Education" written by Koetting. Like Snelbecker (1974), Koetting (1996) asserted that "...theories are derived from philosophies and ideologies" (p. 1142) and he suggests that one's theoretical stance affects practice, and vice versa (whether one is aware of it or not). Interestingly, Koetting's (1996)

more recent perspectives, as reflected in his chapter, are similar to Ely's early concept of philosophy as a "filter" through which decisions are made.

More recently, Richey (1998) addressed the relationship between practitioner values and the perceived relevance of research claiming that "values influence whether the research commands attention and how the research problem is defined" (p. 9). While values may be seen as only one element of philosophy, the implications address similar issues: one's orientation to the world exerts influence over one's theoretical stance.

Finally, philosophy is commanding greater attention in instructional technology textbooks. For example, Smith and Ragan (1999) address three philosophical perspectives of instructional designers. These "basic types" of philosophy include 1) rationalism (constructivism) which posits that reality is made and not found and that reason is the primary source of knowledge, 2) empiricism (objectivism) which postulates that experience is the only source of knowledge and reality is objective, and 3) pragmatism, a "middle ground" between rationalism and empiricism because knowledge is constantly being negotiated based upon changing experiences (Smith & Ragan, 1999). Smith and Ragan's section on philosophy also supports an apparent trend in the literature that acknowledges the personal nature of philosophy as it relates to designer decision-making.

Potential Contributions of Philosophical Inquiry to Instructional Technology

Philosophical inquiry – the importance and uses of critical thinking – is ill defined in Instructional Technology. Criticism could be considered as a method of critical thinking which "... links with all other paradigms for inquiry being informed by results from other methods and in turn informing other methods with different theoretical perspectives" (Belland, Duncan, & Deckman, 1991, pp. 151-152). At its finest, criticism in the instructional technology is like art or

literary criticism, sharing observations from unique vantage points. At its worst, criticism can be ugly or unkind; a blatant disregard for common courtesies. The information that follows is offered as a veritable "starting point" or framework for philosophical inquiry in the field. Here, a utilitarian and commonplace usage of philosophy (Ely, 1970) will serve as a guiding principle for discussions about philosophical analysis and four dimensions of philosophical inquiry.

Philosophical Analysis

For the instructional technologist, analysis is fuel for design activities. Whether analysis is a discrete phase, or fully integrated into design, analysis is generally a reductionistic activity, breaking information down into its basic elements. For example, Job/Task Analysis may explore a job function in terms of general job duties, which breakdown into specific tasks, which breakdown into specific task elements. Similarly, philosophical analysis is the process of taking ideas apart and putting them back together in order to understand how they function (Morris, 1999). Morris (1999) notes that "the analysis of knowledge as properly justified true belief breaks it down into what are called necessary and sufficient conditions, or, to be more exact, into individually necessary and jointly sufficient conditions" (p. 45). Accordingly, in order for knowledge to exist, belief is necessary. Philosophical analysis, therefore, is a process for examining beliefs.

The concept of learning may be used to illustrate the process of philosophical analysis, as it relates to instructional technology. To analyze learning philosophically, one must first break it down into individually necessary and jointly sufficient conditions. The first step is to begin with a definition of learning: "A relatively stable change in knowledge or behavior as a result of experience" (Mayer, 1982). The next step is to identify each component of the definition: knowledge, behavior; experience. According to this definition, there appears to be three

conditions and each is necessary for learning to occur. You can't have learning unless there's a stable change in knowledge or behavior *and* it must result from experience. However, these conditions alone aren't sufficient. For example, someone could be teaching manipulative math and the desired outcome would be a demonstration of this capability. If an individual can calculate math problems in his head, then we would have no idea if learning occurred. Therefore, knowledge or behavior must also be *observable*, another condition. But, the person we're observing could be a savant or biologically gifted and his prowess with math may not result from experience, so we still don't have sufficiency. Is it possible that without an observer, not only does the behavior not exist, but neither does the experience? Perhaps one more condition is necessary. Perhaps we need to explore our definitions of knowledge and behavior. The point to be made is that each one of our conditions is necessary, and all of them jointly would be sufficient for learning. This process of philosophical analysis sheds light upon our understanding of important concepts – and beliefs – that are intimately related to instructional technology. Philosophical analysis is one mode of inquiry; yet, the central concern of philosophy – how to think critically – could be framed according to four general areas of inquiry known as "transcendentals" (Morris, 1997).

The Four Transcendentals – A Framework for Philosophical Inquiry

How frequently do we examine our beliefs? If we're like most people, instructional technologists are too busy living their lives to stop and think about beliefs. But, the impact on instruction and the field could be far-reaching. There are four "transcendentals" or timeless values that span across all manner of objects (Morris, 1997) which provide a foundation for philosophical inquiry in the field of instructional technology. These dimensions of human experience include:

1. The Intellectual Dimension, which aims at Truth
2. The Aesthetic Dimension, which aims at Beauty
3. The Moral Dimension, which aims at Goodness
4. The Spiritual Dimension, which aims at Unity (Morris, 1997, p.19-20).

The following section will provide a brief overview of each of these values and illustrate their potential relevance to the field of instructional technology.

1. The intellectual dimension, which aims at truth. If we accept the notion that human beings think and that all people have a mind, then we must also recognize that all people have an intellectual capacity. The intellectual dimension reflects the pursuit of knowledge. As noted earlier, knowledge can't exist without belief because a person can't know something without first believing in it. Since false beliefs also exist in our world (e.g., I can believe that the sky is falling), the intellectual dimension, which aims at truth, serves as a guide to reality by clarifying the way things are. The concept of truth, as it relates to instructional technology, is a contemporary issue in the field because it has become a point of departure among the more recent theories of learning. Instruction that is based upon behavioral or cognitive theories of learning assumes that truth is objective. In other words, the purpose of instruction is to achieve defined learning objectives or to acquire defined areas of content. Constructivism, which may be defined as either a general theory of cognition (Wilson, 1997) or a philosophical orientation (Lebow, 1995) is centered on the assumption that truth and reality are subjective. Constructivists define learning as an active process of constructing knowledge rather than acquiring it (Duffy & Cunningham, 1996). Understanding one's own beliefs about truth can help the instructional technologist manage decisions during the instructional design process, as well as prevent or

resolve problems along the way. In this way, philosophical inquiry could guide the instructional technologist toward action that is aligned with her worldview or call attention to any inconsistencies.

2. The aesthetic dimension, which aims at beauty. The aesthetic dimension of human experience, which seeks beauty, encompasses all forms of delight (Morris, 1999). Before discussing the aesthetic dimension in relation to instructional technology, it may be helpful to pause for a moment think about how you feel when you encounter something beautiful. Whether it's a work of art, a mountain top or a child's face, beauty liberates, refreshes, restores and inspires (Morris, 1997). In this regard, beauty can be something experienced or felt by the learner; or it may simply be finding an elegant solution to an instructional problem. If "... art, craft, and science all have a role to play in the strategies and tactics of instructional development" (Davies, 1981/1991, p. 96), then

> the truly creative scientist needs something of the artist's divergent thought to see new possibilities while for his part the artist needs to be able to apply the single-minded perseverance of the scientist to develop his ideas. What makes design such a challenging task psychologically is the very even balance of these two sets of mental skills that are needed to produce creative work (Lawson as cited in Rowland, 1993, p. 86).

Philosophical inquiry in the aesthetic dimension would most likely explore the nature of design. Like the architect, the instructional designer can build instruction that serves a purpose while the true artist will find ways to brighten the human experience.

3. The moral dimension, which aims at goodness. Just as truth and beauty enhance life, goodness enriches human experience. Overstreet (as cited in Morris, 1997) provides insight into

the way in which these three transcendentals seem to be connected: "Goodness is a special kind of truth and beauty. It is truth and beauty in human behavior" (p. 116). When people "do the right thing," inner strength and interpersonal strength is nurtured and developed. For the instructional technologist, the question is what is the right thing to do?

Although some people believe that morality is concerned with private values and ethics deals with public conduct, the terms "ethics" and "morality" can be used synonymously because they both reflect the same fundamental values (Morris, 1997). Ethical conduct is a contemporary issue in the field that has been addressed by the International Board of Standards for Training, Performance and Instruction (ibstpi, 1999). The IBSTPI Credo for Performance Technologists and Instructional Designers addresses the notion of both personal/professional development and social responsibility. The statements that comprise this credo reflect a consensus from Delphi Respondents about "doing the right thing" in our field.

Philosophical inquiry about designer decision making offers another way to explore the moral dimension. In a milieu where instructional technologists are continually challenged to be better, faster and cheaper (Tessmer & Wedman, 1990), questions about the nature of ethical decision making become paramount. At the most basic level, philosophical inquiry would explore whether or not our decisions are compatible with our belief systems. This approach would require awareness of one's own beliefs, as well as an understanding of what the client or sponsor believes and values. One clear implication for the instructional technologist is that it may be necessary to work with clients or sponsors to identify or discover their beliefs.

As Luiz (1982) noted, designers interpret instructional problems through the beliefs and values that comprise their personal philosophy; yet, in most situations, a range of choices often exists. Therefore, the first decision one makes would be a judgement about which feasible

options to select, followed by a decision to act on one of the choices (Morris, 1997). The path to ethical decision making – in general – is often defined by "rules for living" which, for the instructional technologist, could be found in a professional credo, a procedural model, personal philosophy or any combination thereof. Along the way to ethical decision making, instructional technologists can stop and ask oneself if his/her decisions are aligned with one's beliefs.

Another mode of philosophical inquiry in the moral dimension, could be a "moral audit" of instructional decisions that have been made that were later regretted. Here, the instructional technologist could explore any consistent themes and/or consequences that resulted from decisions that were morally or ethically wrong (decisions that were incongruous with personal beliefs). The ultimate benefits of this activity would be wisdom and virtue, a perspective on building inner and interpersonal strength, and most importantly, insight into the impact of our actions on the learner.

4. The spiritual dimension, which aims at unity. One facet of the spiritual dimension of human experience is concerned with going beyond the surface and exploring a deeper view of the world. The notion of depth, as it relates to the spiritual dimension, is really about transcending surface realities and looking beyond what meets the eye. For the instructional technologist, the spiritual dimension involves looking for hidden details and revealing layers of meaning; looking beyond the observable. The challenge is to view instruction like one would experience sculpture or art, seeing new details from every new vantage point.

Spirituality in our field would be concerned with more than just solving instructional problems, or conducting valid and reliable research, which are at the surface; for the instructional technologist, spirituality is all about learning and reflection. It's about deep learning that results in irreversible change (Senge, Kleiner, Roberts, Ross, & Smith, 1994), reflecting on the

experience, as well as the capacity to share the depth of one's perspective with others. A good illustration of this concept is self-reflexive research which "... involves professional self-critique, in which the researchers own up to their values and how they are present in their work as interested people" (Anderson & Damarin, 1996, p. 273).

> Another facet of the spiritual dimension deals with connectedness, which seeks unity: ... connectedness, or intimate integration, between our thoughts and our actions, between our beliefs and emotions, between ourselves and others, between human beings and the rest of nature, between all of nature and nature's source. Unlimited connectedness. Ultimate unity. (Morris, 1997, p. 179)

Issues of integration in the field have been addressed by Seels (1995) who expressed "... a need to expand ID [instructional design] fundamentals and to resolve many issues by integrating theories and integrating theory and practice" (p. 247). Interestingly, the importance of connecting and integrating the arts and sciences appears to be a high priority (Seels, 1995); and, the very stuff of which philosophical inquiry is made. Finn (1953/1996) once remarked that clarification was one of the jobs of the philosopher. The issues of integration in the field could be among the greatest challenges for contemporary thinkers in instructional technology today.

Another way to understand connectedness might be to explore relationships among designer, instructor, delivery system, learner and the environment. Here, the role of context in learning and instructional design (Tessmer & Richey, 1997) provides a newer path of inquiry into the spiritual dimension. Context is all about depth and connection. While this discussion about the spiritual dimension may appear to be more academic than practical, Tessmer and Richey (1997) offer the instructional technologist a variety of tools and techniques for dealing with issues of depth and connectedness in instructional design. For the philosopher, it is also

important to ask questions about *why* the tools and techniques of contextual analysis are important. While the familiar portal of systems theory helps explain complexity and the overall importance of connectedness in instruction (and our world), it often falls short of explaining matters of the spirit. Here, philosophical inquiry can uncover deeper layers of meaning.

While there doesn't appear to be much discussion about "freeing the spirit" in instructional technology, Keller's (1983) claim that motivation is the forgotten heart of instructional design suggests that design needs to address more than practical issues and provide for the human spirit (Keller, 1979). This section on the spiritual dimension will conclude by posing questions about four spiritual needs (Morris, 1999) that have implications for instructional technologists: (1) How can we help the learner feel special, distinctive and unique? If we all have a need to feel important, how can instruction facilitate this basic spiritual need? (2) How can we help the learner feel connected to something important? If people yearn for a feeling of belonging, then how can we build a sense of spirit into instruction? (3) How can we help the learner feel like he/she is making a difference? If people have spiritual needs about feeling useful, then how can we facilitate experiences that are fulfilling and meaningful? (4) How can we help the learner develop a deep understanding and passion for what's important? If people have a deep spiritual need to understand how their efforts fit into the "big picture," then how can we help people see that instruction is surrounded by a multiple of factors?

These questions address four spiritual needs that could potentially be nurtured by the instructional technologist: Uniqueness, Union, Usefulness and Understanding (Morris, 1999). At the very least, they provide more fodder for philosophical inquiry in the spiritual dimension.

Conclusion

Philosophy, as method of inquiry, appears to be making a comeback (Anderson, 1995). The philosophical counseling movement, which combines the wisdom of the world's greatest thinkers with practice is growing (Marinoff, 1999), the search for spirit in the workplace (Lee & Zemke, 1993) and the notion of "corporate soul" (Morris, 1997) illustrate a new era in which we find ourselves living, "... a time of rethinking and rebuilding in which beliefs about belief are shaken as never before, a time in which issues once left to the philosophers – such as the nature of truth – become matters of vital everyday importance to ordinary people" (Anderson, 1995, p. 3). And, in our field, "... which draws knowledge and practice from a wide range of arts and sciences, educational technology should be able to use a variety of ways of investigating and knowing in order to guide inquiry and practice" (Belland et al., 1991, p. 151.). Thus, philosophy is a valid method of inquiry in instructional technology (Koetting, 1996).

Although often mistaken as an "ivory tower" academic discipline, philosophy can provide guidance for the instructional designer and potentially improve decision quality and speed. People have beliefs; values, which are beliefs of relative importance; and, philosophies that are composite statements, which guide and direct their behavior. For this reason alone, philosophy is a valid mode of inquiry in our field. However, theory is derived from philosophy (Koetting, 1996; Smith & Ragan, 1999; Snelbecker, 1974); therefore, philosophical inquiry offers deeper insight into the theoretical foundations of our field. And, our field advances through interactions between theory and practice, and philosophical inquiry builds fundamental skills that are valued in our field.

At a deeper level, the voices of our founders can help us develop an appreciation for philosophy in instructional technology because it is their wisdom that set the course for the field

as we know it today. Their vision appears timeless. It only makes sense that "...the philosophical lineage of Charters-Dale-Hoban-Finn ... yielded the most productive thinking about the field ..." (Ely, 1970, p.85). One could simply look at the philosophical lineage of Socrates – Plato – Aristotle to recognize the tremendous impact of teacher-student relationships. Ely (personal communication), who has served as a veritable conscience for the field, was greatly influenced by Dale and Finn; and, Seels, whose concerns about the field include definition (Seels & Richey, 1994), theory development (Seels, 1997) and issues of integration (Seels, 1995), was Edgar Dale's last doctoral student. Wisdom, practical insight for living, is timeless.

Philosophy is linked to all modes of inquiry by virtue of its fundamental and timeless question, "why?" Through progressive layers of questions and thorough examination, philosophical inquiry produces wisdom. Wisdom is worthy of pursuit, not only because it helps us live good lives, (Morris, 1999), but it also helps us become better researchers and designers. Posing questions is the major task of philosophy, which is the basis for research and the foundation upon which our field is built (Koetting, 1996). Simply put, "without good questions, there is no inquiry" (Koetting, 1996, p. 1144).

The role of philosophy in the field of Instructional Technology has not been explicated. Exploratory studies that investigate philosophical assumptions about the theory and practice of Instructional Technology are rare. Given the variety of philosophical orientations that currently exist in the field today, this paper may provide insight into understanding that various ways in which philosophy shapes instructional design practice.

References

Anderson, J. H., & Damarin, S. K. (1996). Poststructural feminism and research in educational communications and technology. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 269-275). New York: Simon & Schuster Macmillan.

Anderson, W. T. (1995). Introduction: What's going on here? In W. T. Anderson (Ed.), *The truth about the truth: De-confusing and re-constructing the postmodern world* . New York: G.P. Putnam's Sons.

Belland, J. C., Duncan, J. K., & Deckman, M. (1991). Criticism as methodology for research in educational technology. In D. Hlynka & J. C. Belland (Eds.), *Paradigms regained: The uses of illuminative, semiotic and post-modern criticism as modes of inquiry in educational technology* (pp. 151-164). Englewood Cliffs, NJ: Educational Technology Publications, Inc.

Dale, E. (1946/1996). The 'cone of experience'. In D. P. Ely & T. Plomp (Eds.), *Classic writings on instructional technology* . Englewood, CO: Libraries Unlimited, Inc. (reprinted from *Audio-visual methods in teaching,* 1st ed., 37-51. New York: Dryden Press).

Davies, I. K. (1981/1991). Instructional development as an art: One of the three faces of ID. In D. Hlynka & J. C. Belland (Eds.), *Paradigms regained: The uses of illuminative, semiotic and post-modern criticism as modes of inquiry in educational technology* . Englewood Cliffs, NJ: Educational Technology Publications, Inc. (Reprinted from *Performance and Instruction,* July 1981).

Duffy, T. M., & Cunningham, D. J. (1996). Constructivism: Implications for the design and delivery of instruction. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 170-198). New York: Simon & Schuster Macmillan.

Ely, D. P. (1970). Toward a philosophy of instructional technology. *Journal of Educational Technology, 1*, 81-94.

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 6*(4), 50-72.

Finn, J. D. (1953/1996). Professionalizing the audio-visual field. In D. P. Ely & T. Plomp (Eds.), *Classic writings on instructional technology* (pp. 231-241). Englewood, Colorado: Libraries Unlimited, Inc. (Reprinted from *Audio-visual communications review* 1(1):6-18 with permission of Association for Educational Communications and Technology).

Finn, J. D. (1962/1996). A walk on the altered side. In D. P. Ely & T. Plomp (Eds.), *Classic writings on instructional technology* (pp. 47-55). Englewood, Colorado: Libraries Unlimited, Inc. (Reprinted with permission from *Phi delta kappan* 44(1):29-34).

Hlynka, D. (1992). *Towards a philosophy of educational technology* (Draft notes on philosophy presented to the AECT Definitions Committee). Winnipeg, Canada: University of Manitoba.

Hoban, C. F., Hoban, F. H., & Zisman, S. B. (1937). *Visualizing the curriculum*. New York: The Cordon Company.

ibstpi. (1999, May 5, 1999). *The ibstpi 1998 instructional design competencies*. Available: http://www.ibstpi.org/inststandards.html [2000, January 18, 2000].

Jonassen, D. H. (Ed.). (1996). *Handbook of research for educational communications and technology*. New York: Simon & Schuster Macmillan.

Keller, J. M. (1979). Motivation and instructional design: A theoretical perspective. *Journal of Instructional Development, 2*(4), 26-34.

Keller, J. M. (1983). Motivational design of instruction. In C. M. Reigeluth (Ed.), *Instructional design theories and models: An overview of their current status* (pp. 386-433). Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.

Knowlton, D. C., & Tilton, J. W. (1929). *Motion pictures in history teaching*. New Haven, CT: Yale University Press.

Koetting, J. R. (1983). *Philosophical foundations of instructional technology*. Paper presented at the annual meeting of the Association for Educational Communications and Technology, New Orleans, LA.

Koetting, J. R. (1996). Philosophy, research, and education. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 1137-1147). New York: Simon & Schuster Macmillan.

Koetting, J. R., & Januszewski, A. (1991). *Theory building and educational technology: Foundations for reconceptualization (Report No. IR-015 158).* Paper presented at the 1991 Annual National Convention of the Association for Educational Communications and Technology (AECT).

Lebow, D. (1995). Constructivist values for instructional design: Five principles toward a new mindset. In B. B. Seels (Ed.), *Instructional design fundamentals: A reconsideration* . Englewood Cliffs, NJ: Educational Technology Publications, Inc.

Lee, C., & Zemke, R. (1993, June 1993). The search for spirit in the workplace. *Training, 30,* 21-28.

Luiz, T. (1982). *A comparative study of humanism and pragmatism as they relate to decision making in instructional development processes.* Unpublished Doctoral Dissertation, Michigan State University, East Lansing.

Macdonald, B. J. (Ed.). (1995). *Theory as a prayerful act*. New York: Peter Lang.

Marinoff, L. (1999). *Plato, not prozac!: Applying philosophy to everyday problems*. New York: HarperCollins Publishers, Inc.

Mayer, R. E. (1982). Learning. In Y.E. Mitzel (Ed.), *Encyclopedia of educational research* (pp. 1040-1058). New York: The Free Press.

McBeath, R. J. (Ed.). (1972). *Extending education through technology: Selected writings by James D. Finn on instructional technology*. Washington, DC: Association for Educational Communications and Technology.

Morris, C. W. (1946). *Signs, language and behavior*. Englewood Cliffs, NJ: Prentice Hall.

Morris, T. (1997). *If Aristotle ran General Motors: The new soul of business*. New York: Henry Holt and Company, Inc.

Morris, T. (1999). *Philosophy for dummies*. Foster City, CA: IDG Books Worldwide, Inc.

Nichols, R. G., & Allen-Brown, V. (1996). Critical theory and educational technology. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 226-252). New York: Simon & Schuster Macmillan.

Richey, R. C. (1997). Agenda-building and its implications for theory construction in instructional technology. *Educational Technology, 37*(1), 5-11.

Richey, R. C. (1998). The pursuit of useable knowledge in instructional technology. *Educational Technology Research and Development, 46*(4), 7-22.

Rowland, G. (1993). Designing and instructional design. *Educational Technology Research and Development, 41*(1), 79-91.

Saettler, P. (1990). *The evolution of American educational technology*. Englewood, Colorado: Libraries Unlimited, Inc.

Schunk, D. H. (1991). *Learning theories: An educational perspective*. New York: Macmillan.

Seels, B. (1995). Instructional design fundamentals: Issues of integration. In B. B. Seels (Ed.), *Instructional design fundamentals: A reconsideration* (pp. 247-253). Englewood Cliffs, NJ: Educational Technology Publications, Inc.

Seels, B. (1997). Introduction to special section: Theory development in educational/instructional technology. *Educational Technology, 37*(1), 3-5.

Seels, B. B., & Richey, R. C. (1994). *Instructional technology: The definition and domains of the field*. Washington, DC: Association for Educational Communications and Technology.

Senge, P. M., Kleiner, A., Roberts, C., Ross, R. B., & Smith, B. J. (1994). *The fifth discipline fieldbook: Strategies and tools for building a learning organization*. New York: Doubleday.

Smith, P. L., & Ragan, T. J. (1999). *Instructional design*. (2nd ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.

Snelbecker, G. E. (1974). *Learning theory, instructional theory and psychoeducational design*. New York: McGraw.

Tessmer, M., & Richey, R. C. (1997). The role of context in learning and instructional design. *Educational Technology Research and Development, 45*(2), 85-115.

Tessmer, M., & Wedman, J. F. (1990). A layers-of-necessity instructional development model. *Educational Technology Research and Development, 38*(2), 77-85.

Wilson, B. G. (1997). The postmodern paradigm. In C. R. Dills & A. J. Romiszowski (Eds.), *Instructional Development Paradigms* . Englewood Cliffs, NJ: Educational Technology Publications, Inc.

Figure 1. Philosophical lineage in instructional technology.